

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Quality Service Products

Ohio Manufacturing Extension Partnership

Quality Service Products Proves Product Viability

Client Profile:

Quality Service Products, founded in 1979 in Columbus, Ohio, is a low- to medium-volume custom blow molder. The 12 person company custom manufactures polyethylene and polypropylene bottles, cartridges, and containers.

Situation:

One of Quality Service Products' customers was developing a product that would require high volumes of specialty containers, but the customer's design created a clogging problem. As a solution, Quality Service Products proposed a very thin, flexible, bottle-within-a-bottle design. The customer liked the idea; however, the concept needed to be proven before the customer could accept it. Unfortunately, this thin inner bottle would be impossible to prototype without making a costly mold. The company asked the Manufacturing Resource Office (MRO), a NIST MEP network affiliate, for assistance.

Solution:

MRO suggested a finite element analysis on a model of the inner and outer bottle designs to prove Quality Service Products' solution. MRO helped the company locate a designer with the skills necessary to conduct the analysis. The designer worked closely with Quality Service Products personnel to accurately model the size, shape, and materials of the two bottles. The resulting model and analysis video showed that the bottles would work as anticipated. The model even proved the ability to place the thin bottle inside the outer bottle with a vacuum. Quality Service Products shared the models and design concepts with its customer, who was very impressed and plans to adopt Quality Service Products' container solution.

Results:

Created new product prototype.

Anticipating a sales increase of \$500,000.

Planning to employ 2 to 3 more people as a result of the new business.

Saved the customer \$2.5 million in costs per year.

Testimonial:

"Between the work the Manufacturing Resource Office did and samples Quality Service Products made for the project, we had two customers very impressed with

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what we can do for them. MRO was outstanding in what they provided and how they understood what we wanted.”

Nelson Jeck, Jr., President